

REMARKS

Claim Rejections

Claims 1-15 are rejected under 35 U.S.C. § 102(b) as being clearly anticipated by Bond et al. (U.S. Patent 5,421,798).

Drawings

It is noted that no Patent Drawing Review (Form PTO-948) was received with the outstanding Office Action. Thus, Applicant must assume that the drawings are acceptable as filed.

New Claims

By this Amendment, Applicant has canceled claims 1-15 and have added new claims 16-30 to this application. It is believed that the new claims specifically set forth each element of Applicant's invention in full compliance with 35 U.S.C. §112, and define subject matter that is patentably distinguishable over the cited prior art, taken individually or in combination.

The new claims recite a passive repeating plyometric muscle strengthening method that includes the following steps: positioning a trainee on a pedal, moving the pedal up and down repeatedly under a load for exercising, and burdening the trainee with a continuous load to perform plyometric and eccentric contraction muscle training in a short time with a large amount of acting units. The method further includes the step of moving the pedal up and down is set at a speed between 1 and 1000 times per minute. The moving step is carried out by slipping the pedal (1) over a plurality of upright posts (55) on a surface of a plate seat (7), and moving the pedal (1) up and down by an electric motor (2). The burdening step includes a load bearing rack (50) provided on the upright posts (55). In one embodiment of the present invention, the step of moving is carried out by setting a rotating rate of the motor (2) between 1 rpm and 1000 rpm. In another embodiment of the present method, the step of moving is carried out by controlling the rotating rate of the motor (2) by a variable resistance adjuster. In another embodiment, the electric motor (2) drives a rotating wheel (22). A follower rod (24) has a first end linked with the pedal (1) and a second end linked eccentrically to the rotating wheel (22). In a further

embodiment of the present invention, the step of moving includes adjusting an amplitude of the up and down motion of the pedal (1).

Further, the present invention recites claims to a passive repeating plyometric muscle strengthening apparatus that has a pedal (1), a plurality of upright posts (55), a seat plate (7) and a power mechanism (2, 22, 24). The plurality of upright posts (55) are slidably connected to the pedal (1). A load bearing rack (50) is provided on the upright posts (55). The seat plate (7) is connected to the upright posts (55) and the load bearing rack (50). The power mechanism (2, 22, 24) is for driving the pedal in an up and down motion at a controlled speed. The power mechanism is provided with a device adapted for controlling an amplitude of up and down moving and a rotating rate of the pedal (1). The power mechanism includes an electric motor (2) provided below the pedal (1) to drive a rotating wheel (22) and a follower rod (24). The follower rod (24) has a first end linked with the pedal (1) and a second end linked eccentrically to the rotating wheel (22). The rotating rate of the electric motor is controlled by a variable resistance adjuster. The amplitude of up and down motion of the pedal (1) is determined by the length of the follower rod (24) and the position that the follower rod (24) is connected eccentrically to the rotating wheel (22). The load bearing rack (50) is comprised of a pair of "H" shaped rack members (51, 52) that are provided respectively to lines of adjustment holes for receiving holding rods (53, 54) therein.

In another embodiment of the present invention, the seat (7) is provided on a bottom surface thereof with rollers (71) at the four corners and with a screw foot (72). In another embodiment of the present invention, the electric motor (2) is set at a rotating rate between 1.5 rpm and 150 rpm. Further, the controlled speed of repeated up and down motion of the pedal (1) is set between 30 and 300 times per minute.

The cited reference to Bond et al. disclose a chain evaluation and exercise system. The apparatus (20) is supported by a frame (30) which includes a base portion (33), side beams (34, 36) and cross beams (35, 37). The frame also supports a seat (31). Two pedal assemblies (40, 42) are positioned within reach of the seat (31). Each pedal assembly (40, 42) is mounted to a sled (50, 52). The sleds (50, 52) are mounted to double side guide tracks (54, 56) which are secured

to beams (34, 36) of the frame (30). Each sled (50, 52) is coupled to a belt (60, 62). Each belt (60, 62) wraps around a rear pulley (64, 66) and a front pulley (68, 69), respectively. Two servo motors (80, 82) provide the resistance load and force to the pedal assemblies (40, 42) being transmission assemblies (70, 72).

The present invention is clearly distinguishable from Bond et al. Bond discloses two pedal assemblies whereas the present invention has one pedal. Further, the pedal assemblies in Bond move horizontally whereas the pedal in the present invention moves vertically. Additionally, in the present invention the pedal is slidably mounted on a plurality of upright posts, which are not taught by Bond. Therefore, the structural differences discussed above, Applicant respectfully submits that the present invention is distinguishable from Bond.

Version With Markings To Show Changes Made

Attached hereto is a marked-up version of the changes made to the application by the current amendment. The attached document is captioned VERSION WITH MARKINGS TO SHOW CHANGES MADE.

Summary

In view of the foregoing amendments and remarks, Applicants submit that this application is now in condition for allowance and such action is respectfully requested. Should any points remain in issue, which the Examiner feels could best be resolved by either a personal or a telephone interview, it is urged that Applicants' local attorney be contacted at the exchange listed below.

Respectfully submitted,

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VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE CLAIMS:

Claims 1-15 have been canceled and new claims 16-30 have been added as follows:

--16. (New) A passive repeating plyometric muscle strengthening method which comprises the following steps:

positioning a trainee on a pedal;

adjustably moving the pedal up and down repeatedly under a load for exercising; and

burdening the trainee with a continuous load to perform plyometric and eccentric contraction muscle training in a short time with a large amount of acting units.

17. (New) A passive repeating plyometric muscle strengthening method according to claim 16, wherein the step of moving the pedal up and down is set at a speed between 1 and 1000 times per minute.

18. (New) A passive repeating plyometric muscle strengthening method according to claim 16, wherein the moving step is carried out by slipping the pedal over a plurality of upright posts on a surface of a plate seat, and moving the pedal up and down by an electric motor and the burdening step includes a load bearing rack provided on the upright posts.

19. (New) A passive repeating plyometric muscle strengthening method according to claim 18, wherein the step of moving is carried out by setting a rotating rate of the motor between 1 rpm and 1000 rpm.

VERSION WITH MARKINGS TO SHOW CHANGES MADE

20. (New) A passive repeating plyometric muscle strengthening method according to claim 18, wherein the step of moving is carried out by controlling the rotating rate of the motor by a variable resistance adjuster.

21. (New) A passive repeating plyometric muscle strengthening method according to claim 18, wherein the step of moving utilizes the electric motor to drive a rotating wheel, the follower rod has a first end linked with the pedal and a second end linked eccentrically to the rotating wheel.

22. (New) A passive repeating plyometric muscle strengthening method according to claim 21, wherein the step of moving includes adjusting an amplitude of the up and down motion of the pedal.

23. (New) A passive repeating plyometric muscle strengthening apparatus comprising:

a plate seat;

a plurality of upright posts extending upwardly from the plate seat, a load bearing rack being provided on the upright posts;

a single pedal slidably mounted on the upright posts so as to be movable relative to the plate seat in a vertical direction; and,

a power mechanism for driving the pedal in an up and down vertical motion at a predetermined speed, the power mechanism including a device for controlling an amplitude and rate of up and down motion of the pedal.

24. (New) The passive repeating plyometric muscle strengthening apparatus according to claim 23, wherein the power mechanism includes an electric motor provided below the pedal driving a rotating wheel; and a follower rod having a first end linked with the pedal and a second end linked eccentrically to the rotating wheel.

VERSION WITH MARKINGS TO SHOW CHANGES MADE

25. (New) The passive repeating plyometric muscle strengthening apparatus according to claim 24, wherein a rotating rate of the electric motor is controlled by a variable resistance adjuster.

26. (New) The passive repeating plyometric muscle strengthening apparatus according to claim 24, wherein the amplitude of up and down motion of the pedal is determined by a length of the follower rod and a position that the follower rod is connected eccentrically to the rotating wheel.

27. (New) The passive repeating plyometric muscle strengthening apparatus according to claim 23, wherein the load bearing rack comprises a pair of "H" shaped rack members each having a plurality of adjustment holes for receiving holding rods therein.

28. (New) The passive repeating plyometric muscle strengthening apparatus according to claim 23, wherein the plate seat has a bottom surface with a plurality of rollers thereon.

29. (New) The passive repeating plyometric muscle strengthening apparatus according to claim 24, wherein the electric motor rotates at a speed of between 1.5 rpm and 1,000 rpm.

30. (New) The passive repeating plyometric muscle strengthening apparatus according to claim 23, wherein the rate of repeated up and down motion of the pedal is between 1 and 1,000 times per minute.--